FIG. 1

FIG.2

FIG. 3

IND_LAMBDA_bar P
(CORRECTED FUNCTION OF REAR HEGO VOLTAGE AND TEMP)
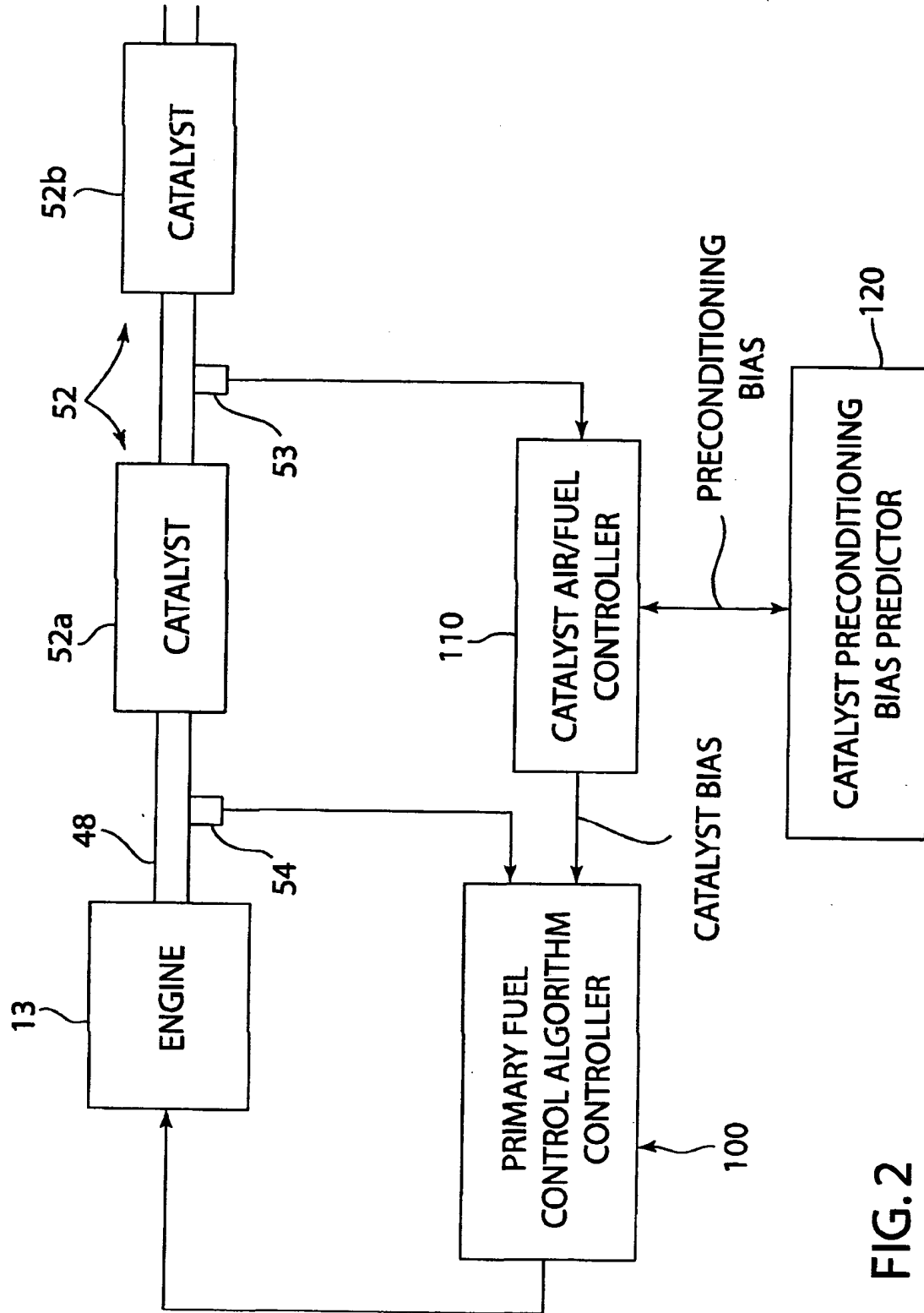
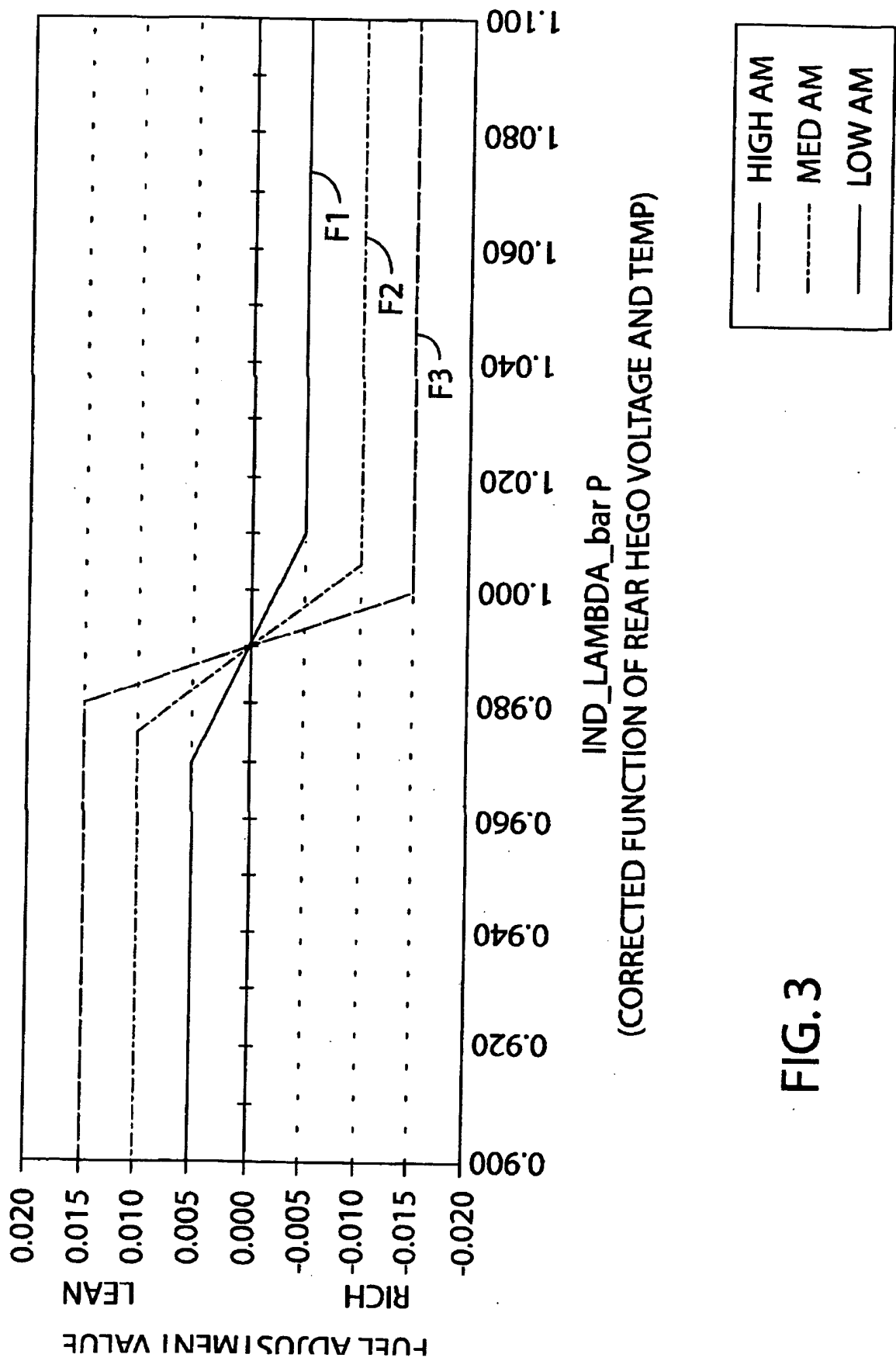|	
——	HIGH AM
—·—·	MED AM
——	LOW AM

CATALYST PRE- CONDITIONING

DETERMINE INDICATED LAMDA AS A FUNCTION OF
HEGO TEMPERATURE AND VOLTAGE — 500

IND_LAMBDA

FILTER LAMBDA VALUE FOR
PROPORTIONAL CONTROLLER — 502

FIG. 4

IND_LAMBDA_bar P

VEHICLE SPEED < TIPIN_VS
& THROTTLE = CLOSED — 504

FALSE

TRUE

ADJ_LAMBDA_barP
+TIPIN_RICH_SHIFT — 506

ADJ_LAMBDA

PROPORTIONAL BIAS TABLE
FNC(LAMBDA, AIR MASS) — 508

IND_LAMBDA_barP

VEGOn2	INDICATED LAMBDA				
0	1.05	1.05	1.05	1.05	1.05
0.1	1.05	1.05	1.05	1.05	1.05
0.2	1.02	1.02	1.02	1.02	1.02
0.4	1.01	1.009	1.008	1.005	1.003
0.45	1.008	1.006	1.004	1.003	1.001
0.5	1.006	1.003	1.002	1.001	0.999
0.55	1.005	1.002	1.001	0.999	0.997
0.6	1.004	1.001	1	0.998	0.995
0.65	1.002	1	0.997	0.995	0.99
0.7	1	0.998	0.995	0.99	0.95
0.9	0.95	0.95	0.95	0.95	0.95
	500	562	842	1112	1562
	EXT_REG				

FIG. 5

FIG.6A

LEAN

RICH

1.0

LEAN BIAS

RICH BIAS

TIME →

FIG.6B

RPM

TIME →

FIG.6C

VEHICLE SPEED

TIPIN

TIME →

FIG.6D

VEHICLE SPEED

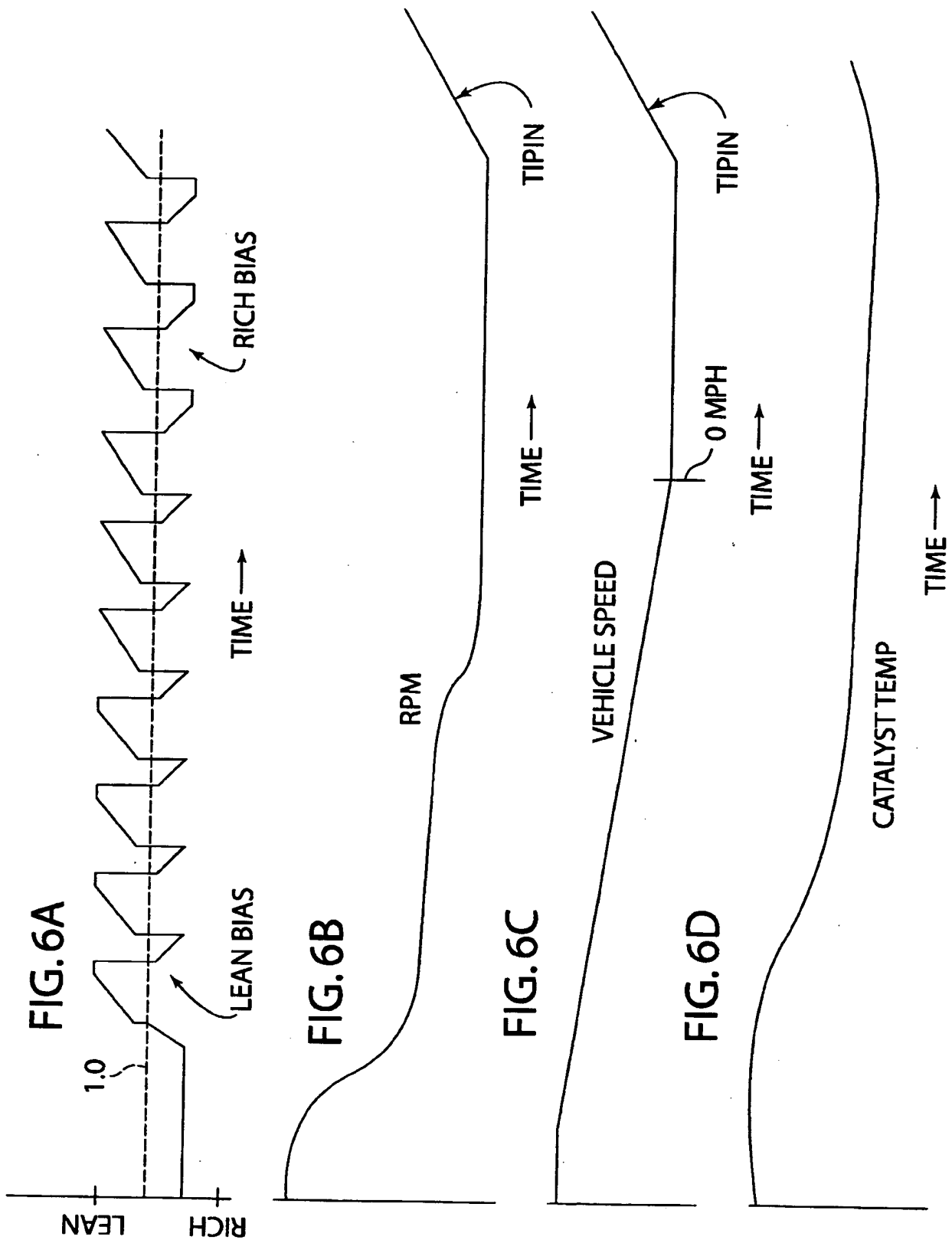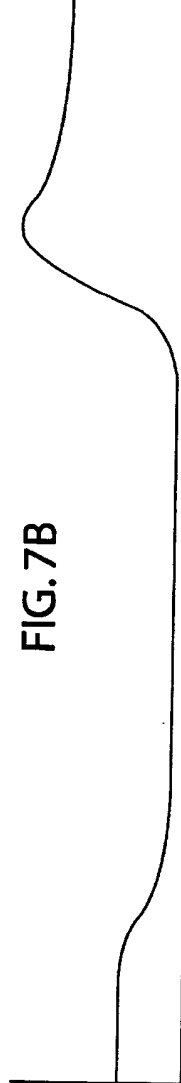0 MPH

TIPIN

TIME →

CATALYST TEMP

TIME →

FIG.7A

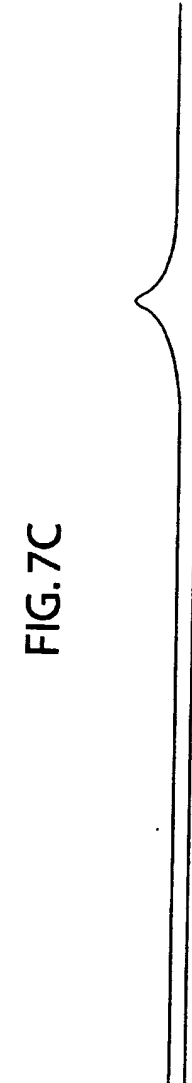THROTTLE
POSITION

FIG.7B

ENGINE
OUT
NO_x

FIG.7C
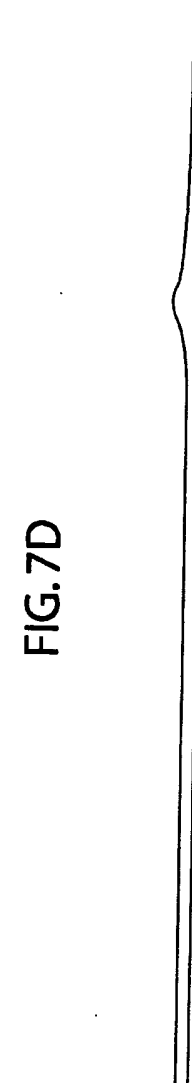
TAIL PIPE
NO_x EMISSIONS
WITHOUT
COMPENSATION

FIG.7D

TAIL PIPE
NO_x EMISSIONS
WITH
COMPENSATION